

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1. (Currently Amended) A protein comprising the amino acid sequence of SEQ ID NO: 2 or 4, wherein said protein has an XIAP-binding activity.

Claim 2. (Currently Amended) A protein comprising the amino acid sequence of SEQ ID NO: 2 or 4 in which one or more amino acids are replaced, deleted, added, and/or inserted, having homology of 60% or higher to the amino acid sequence of SEQ ID NO: 2 or 4, and having a thioredoxin reductase activity and an XIAP-binding activity,

Claim 3. (Currently Amended) A protein having a thioredoxin reductase activity, encoded by a DNA which hybridizes to the DNA comprising the nucleotide sequence of SEQ ID NO: 1 or 3, wherein said protein has an XIAP-binding activity.

Claim 4. (Original) A protein comprising the amino acid sequence of SEQ ID NO: 2 or 4 in which one or more amino acids are replaced, deleted, added, and/or inserted and having an XIAP binding activity.

Claim 5. (Original) A protein encoded by a DNA which hybridizes to the DNA comprising the nucleotide sequence of SEQ ID NO: 1 or 3, and having an XIAP binding activity.

Claim 6. (Original) An antibody biding to the protein of any one of claims 1 to 5.

Claim 7. (Original). A cDNA encoding the protein of any one of claims 1 to 5.

Claim 8. (Original) A cDNA comprising a protein coding region of the nucleotide sequence of SEQ ID NO: 1 or 3.

Claim 9. (Original) A vector into which the DNA of claim 7 or 8 has been inserted.

Claim 10. (Original) A transformant carrying the vector of claim 9.

Claim 11. (Original) A method for producing the protein of any one of claims 1 to 5, the method containing culturing the transformant of claim 10.

Claim 12. (Original) An antisense DNA against all or a part of the cDNA of claim 7.

Claim 13. (Original) An oligonucleotide comprising a strand of at least 15 nucleotides and hybridizing to the cDNA of claim 7.

Claim 14. (Original) A DNA encoding a protein with a thioredoxin reductase activity and comprising the first exon or the second exon, and the third to the nineteenth exons below:

the first exon, SEQ ID NO: 18;

the second exon, SEQ ID NO: 19;

the third exon, SEQ ID NO: 20;

the forth exon, SEQ ID NO: 21;

the fifth exon, SEQ ID NO: 22;

the sixth exon, SEQ ID NO: 23;

the seventh exon, SEQ ID NO: 24;

the eighth exon, SEQ ID NO: 25;

the ninth exon, SEQ ID NO: 26;

the tenth exon, SEQ ID NO: 27;

the eleventh exon, SEQ ID NO: 28;

the twelfth exon, SEQ ID NO: 29;

the thirteenth exon, SEQ ID NO: 30;

fourteenth exon, SEQ ED NO: 31;

the fifteenth exon, SEQ ID NO: 32;

the sixteenth exon, SEQ ID NO: 33;

the seventeenth exon, SEQ ED NO: 34;

the eighteenth exon, SEQ ID NO: 35; and  
the nineteenth exon, SEQ ID NO: 36.

Claim 15. (Original) The DNA of claim 14, described by SEQ ID NO: 37.

Claim 16. (Original) A DNA hybridizing to the nucleotide sequence of any one of SEQ ID NOs: 18 to 36 or a part thereof, which can hybridize to human chromosome 22q11.2.

Claim 17. (Original) A DNA which can hybridize to all or a part of a portion of the nucleotide sequence of SEQ ID NO: 37, the portion non-overlapping with the nucleotide sequences of SEQ ID NOs: 18 to 36.

Claim 18. (Original) A method for screening a compound having an activity of inhibiting a binding of XIAP with the binding factor, the method comprising the steps of:

- (a) contacting simultaneously a candidate substance as a subject for screening, and XIAP with the protein of claim 2, or
- (a)' contacting a candidate substance as a subject for screening with XIAP, and then, further contacting with the protein of claim 2,
- (b) determining the amount of the protein of claim 2 which binds and/or does not bind to XIAP, and
- (c) selecting a compound which inhibits binding of XIAP with the protein of claim 2.

Claim 19. (Original) A method for screening a compound having an activity of promoting or inhibiting an enzyme activity of thioredoxin reductase II, the method comprising the steps of:

- (a) contacting a candidate substance as a subject for screening with the protein of any one of claims 1 to 3,
- (b) observing the change in a thioredoxin reductase activity of the protein of any one of claims 1 to 3, and

APPLICANTS: S. TOJI et al.

SERIAL NO.: 09/830,706

AMENDMENT

Page 5 of 8

(c) selecting a compound which promotes or inhibits an enzyme activity of thioredoxin reductase II.